

## SEQUENCE LISTING

<110> Stein, Cy

<120> PHOSPHOROTHIOATE ANTISENSE HEPARANASE OLIGONUCLEOTIDES

<130> 0575/63180

<160> 18

<170> PatentIn version 3.0

<210> 1

<211> 20

<212> DNA

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> anitsense oligonucleotide LB63

<400> 1

tgggctcacc tggctgctcc

20

<210> 2

<211> 20

<212> DNA

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> antisense oligonucleotide LB62

<400> 2

cgccagctgc cgcgcagcgg

20

<210> 3

<211> 20

<212> DNA

<213> Artificial/Unknown

<220>

<221> misc\_feature

<222> ()..()

<223> antisense oligonucleotide LB65

<400> 3  
ccccaggagc agcagcagca 20

<210> 4  
<211> 20  
<212> DNA  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> antisense oligonucleotide LB85

<400> 4  
gtccaggagc aactgagcat 20

<210> 5  
<211> 20  
<212> DNA  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> antisense oligonucleotide LB90

<400> 5  
aggtggactt tcttagaagt 20

<210> 6  
<211> 20  
<212> DNA  
<213> Artificial/Unknown

<220>  
<221> misc\_feature  
<222> ()..()  
<223> antisense oligonucleotide LB94

<400> 6  
tcaaatagta gtgatgccat 20

<210> 7  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> antisense oligonucleotide LB78

<400> 7  
 cttctcctcc acatcaggag

20

<210> 8  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> antisense oligonucleotide LB88

<400> 8  
 attgatgaaa atatcagcct

20

<210> 9  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> antisense oligonucleotide LB101

<400> 9  
 ttatccagcc acataaagcc

20

<210> 10  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>

```
<400> 10
agcgcaggct tgcagcgcag
```

<210>	11
<211>	20
<212>	DNA
<213>	Artificial/Unknown

```
<220>
<221> misc_feature
<222> ()..()
<223> antisense oligonucleotide LB105
```

20

```
<210> 12
<211> 20
<212> DNA
<213> Artificial/Unknown
```

```
<220>
<221> misc_feature
<222> ( ) .. ( )
<223> antisense oligonucleotide LB74
```

20

```
<210> 13
<211> 20
<212> DNA
<213> Artificial/Unknown
```

```
<220>
<221> misc_feature
<222> ()..()
<223> antisense oligonucleotide LB60
```

Page 4

gagccccagc gcccttttct

20

<210> 14  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> antisense oligonucleotide LB72

<400> 14  
 ggagaaccca ggaggatgag

20

<210> 15  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> antisense oligonucleotide LB81

<400> 15  
 ctacagagct tcttgagtag

20

<210> 16  
 <211> 20  
 <212> DNA  
 <213> Artificial/Unknown

<220>  
 <221> misc\_feature  
 <222> ()..()  
 <223> antisense oligonucleotide LB109

<400> 16  
 tataccttgg attgtcagtg

20

<210> 17  
 <211> 1669  
 <212> DNA

&lt;213&gt; Homo Sapiens

&lt;400&gt; 17

atgctgctgc gctcgaagcc tgcgctgccg ccgccgctgc tgatgctgct gctcctgggg	60
ccgctggggtc cctctctccc tggcgccctg ccccgacctg cgcaagcaca gcaggacgtc	120
gtggacctgg acttcttcac ccaggagccg ctgcacctgg tgagccctc gttcctgtcc	180
gtcaccattg acgccaacct ggccacggac ccgcggttcc tcctctcct gggttctcca	240
aagcttcgta ccttggccag aggcttgtct cctgcgtacc tgaggtttgg tggcaccaag	300
acagacttcc taattttcga tcccaagaag gaatcaacct ttgaagagag aagttactgg	360
caatctcaag tcaaccagga tatttgcaaa tatggatcca tccctcctga tgtggaggag	420
aagttacggt tggaatggcc ctaccaggag caattgctac tccgagaaca ctaccagaaa	480
aagttcaaga acagcaccta ctcaagaagc tctgtagatg tgctatacac ttttgcaaac	540
tgctcaggac tggacttgat ctttggccta aatgcgttat taagaacagc agatttgcag	600
tggaaacagtt ctaatgctca gttgctcctg gactactgct cttccaaggg gtataacatt	660
tcttgggaac taggcaatga acctaacagt ttccttaaga aggctgatat tttcatcaat	720
gggtcgcagt taggagaaga ttttattcaa ttgcataaac ttctaagaaa gtccaccttc	780
aaaaatgcaa aactctatgg tcctgatgtt ggtcagcctc gaagaaagac ggctaagatg	840
ctgaagagct tcctgaaggc tgggtggagaa gtgattgatt cagttacatg gcatcactac	900
tatttgaatg gacggactgc taccagggaa gattttctaa accctgatgt attggacatt	960
tttatttcat ctgtgcaaaa agttttccag gtggttgaga gcaccaggcc tggcaagaag	1020
gtctgggttag gagaaacaag ctctgcatat ggaggcggag cgcccttgct atccgacacc	1080
tttgcagctg gctttatgtg gctggataaa ttgggcctgt cagcccgaat gggaatagaa	1140
gtggtgatga ggcaagtatt ctttggagca ggaaactacc atttagtgga tgaaaacttc	1200
gatcctttac ctgattattg gctatctctt ctgttcaaga aattggtggg caccaagggtg	1260
ttaatggcaa gcgtgcaagg ttcaaagaga aggaagcttc gagtatacct tcattgcaca	1320
aacactgaca atccaaggta taaagaagga gatttaactc tgtatgcat aaacctccat	1380
aacgtacca agtacttgcg gttaccctat cctttttcta acaagcaagt ggataaatac	1440

cttctaagac ctttgggacc tcatggatta ctttccaaat ctgtccaact caatgggtcta 1500  
 actctaaaga tgggtgatga tcaaaccttg ccacctttaa tggaaaaacc tctccggcca 1560  
 ggaagttcac tgggcttgcc agctttctca tatagttttt ttgtgataag aaatgccaaa 1620  
 gttgctgctt gcacttgaaa ataaaatata ctagtcctga cactgaaaa 1669

<210> 18  
 <211> 545  
 <212> PRT  
 <213> Homo Sapiens

<400> 18

Met Leu Leu Arg Ser Lys Pro Ala Leu Pro Pro Pro Leu Leu Met Leu  
 1 5 10 15  
 Leu Leu Leu Gly Pro Leu Gly Pro Leu Ser Pro Gly Ala Leu Pro Arg  
 20 25 30  
 Pro Ala Gln Ala Gln Gln Asp Val Val Asp Leu Asp Phe Phe Thr Gln  
 35 40 45  
 Glu Pro Leu His Leu Val Ser Pro Ser Phe Leu Ser Val Thr Ile Asp  
 50 55 60  
 Ala Asn Leu Ala Thr Asp Pro Arg Phe Leu Ile Leu Leu Gly Ser Pro  
 65 70 75 80  
 Lys Leu Arg Thr Leu Ala Arg Gly Leu Ser Pro Ala Tyr Leu Arg Phe  
 85 90 95  
 Gly Gly Thr Lys Thr Asp Phe Leu Ile Phe Asp Pro Lys Lys Glu Ser  
 100 105 110  
 Thr Phe Glu Glu Arg Ser Tyr Trp Gln Ser Gln Val Asn Gln Asp Ile  
 115 120 125  
 Cys Lys Tyr Gly Ser Ile Pro Pro Asp Val Glu Glu Lys Leu Arg Leu  
 130 135 140  
 Glu Trp Pro Tyr Gln Glu Gln Leu Leu Leu Arg Glu His Tyr Gln Lys  
 145 150 155 160  
 Lys Phe Lys Asn Ser Thr Tyr Ser Arg Ser Ser Val Asp Val Leu Tyr  
 165 170 175  
 Thr Phe Ala Asn Cys Ser Gly Leu Asp Leu Ile Phe Gly Leu Asn Ala  
 180 185 190

Leu Leu Arg Thr Ala Asp Leu Gln Trp Asn Ser Ser Asn Ala Gln Leu  
 195 200 205  
 Leu Leu Asp Tyr Cys Ser Ser Lys Gly Tyr Asn Ile Ser Trp Glu Leu  
 210 215 220  
 Gly Asn Glu Pro Asn Ser Phe Leu Lys Lys Ala Asp Ile Phe Ile Asn  
 225 230 235 240  
 Gly Ser Gln Leu Gly Glu Asp Phe Ile Gln Leu His Lys Leu Leu Arg  
 245 250 255  
 Lys Ser Thr Phe Lys Asn Ala Lys Leu Tyr Gly Pro Asp Val Gly Gln  
 260 265 270  
 Pro Arg Arg Lys Thr Ala Lys Met Leu Lys Ser Phe Leu Lys Ala Gly  
 275 280 285  
 Gly Glu Val Ile Asp Ser Val Thr Trp His His Tyr Tyr Leu Asn Gly  
 290 295 300  
 Arg Thr Ala Thr Arg Glu Asp Phe Leu Asn Pro Asp Val Leu Asp Ile  
 305 310 315 320  
 Phe Ile Ser Ser Val Gln Lys Val Phe Gln Val Val Glu Ser Thr Arg  
 325 330 335  
 Pro Gly Lys Lys Val Trp Leu Gly Glu Thr Ser Ser Ala Tyr Gly Gly  
 340 345 350  
 Gly Ala Pro Leu Leu Ser Asp Thr Phe Ala Ala Gly Phe Met Trp Leu  
 355 360 365  
 Asp Lys Leu Gly Leu Ser Ala Arg Met Gly Ile Glu Val Val Met Arg  
 370 375 380  
 Gln Val Phe Phe Gly Ala Gly Asn Tyr His Leu Val Asp Glu Asn Phe  
 385 390 395 400  
 Asp Pro Leu Pro Asp Tyr Trp Leu Ser Leu Leu Phe Lys Lys Leu Val  
 405 410 415  
 Gly Thr Lys Val Leu Met Ala Ser Val Gln Gly Ser Lys Arg Arg Lys  
 420 425 430  
 Leu Arg Val Tyr Leu His Cys Thr Asn Thr Asp Asn Pro Arg Tyr Lys  
 435 440 445  
 Glu Gly Asp Leu Thr Leu Tyr Ala Ile Asn Leu His Asn Val Thr Lys  
 450 455 460



Tyr Leu Arg Leu Pro Tyr Pro Phe Ser Asn Lys Gln Val Asp Lys Tyr  
 465 470 475 480

Leu Leu Arg Pro Leu Gly Pro His Gly Leu Leu Ser Lys Ser Val Gln  
 485 490 495

Leu Asn Gly Leu Thr Leu Lys Met Val Asp Asp Gln Thr Leu Pro Pro  
 500 505 510

Leu Met Glu Lys Pro Leu Arg Pro Gly Ser Ser Leu Gly Leu Pro Ala  
 515 520 525

Phe Ser Tyr Ser Phe Phe Val Ile Arg Asn Ala Lys Val Ala Ala Cys  
 530 535 540

Ile  
 545

109040" 0446350